

## Claims

1. A computer-implemented method for creating a graphical data flow program, wherein the graphical data flow program is operable to invoke a method of an object, wherein the method for creating the graphical data flow program operates in a computer including a display and a user input device, the method for creating the graphical data flow program comprising:

displaying on the screen a node in the graphical data flow program in response to user input, wherein the node is operable to invoke a method of an object;

configuring the node to receive information on the object in response to user input, wherein said configuring comprises connecting the information on the object to an input of the node;

wherein, during execution of the graphical data flow program, the node is operable to invoke the method of the object.

2. The computer-implemented method of claim 1, wherein the node includes an object reference input for receiving a reference to the object;

wherein said configuring comprises connecting said object reference input of the node to receive the reference to the object;

wherein the node receives the information on the object on the object reference input during execution of the graphical data flow program.

3. The computer-implemented method of claim 2, wherein said configuring comprises:

displaying on the screen an object reference node which includes an object reference output that provides the reference to the object; and

connecting the object reference output of the object reference node to the object reference input of the node.

4. The computer-implemented method of claim 3, further comprising:

executing the graphical data flow program, wherein said executing includes propagating the reference to the object from the object reference output of the object reference node to the object reference input of the node

5           5.       The computer-implemented method of claim 1, further comprising:  
              executing the graphical data flow program, wherein said executing includes propagating the information on the object to the node.

10           6.       The computer-implemented method of claim 1, wherein the object is  
              comprised in a server, wherein said configuring comprises:  
                  displaying on the screen a list of libraries associated with one or more servers;  
                  selecting a library from the list of libraries in response to user input  
                  displaying on the screen a list of possible classes from the selected library;  
                  selecting a class from the list of possible classes in response to user input;  
15            wherein the object is instantiated from the class.

20           7.       The computer-implemented method of claim 1, further comprising:  
              constructing execution instructions in response to the graphical data flow  
              program, wherein the execution instructions are executable to invoke the method of the  
              object; and  
              executing said execution instructions, wherein the node invokes the method of the  
              object during said executing.

25           8.       The computer-implemented method of claim 7, wherein said executing  
              includes propagating the information on the object to the node.

30           9.       The computer-implemented method of claim 1, wherein the graphical data  
              flow program is operable to invoke the method of the object for performing  
              instrumentation functions on an instrument.

10. The computer-implemented method of claim 1, wherein the graphical data flow program includes a block diagram and a front panel, wherein the block diagram includes the node.

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11. A computer-implemented method for creating a graphical data flow program, wherein the graphical data flow program is operable to invoke a property of an object, wherein the method for creating the graphical data flow program operates in a computer including a display screen and a user input device, the method for creating the graphical data flow program comprising:

displaying on the screen a node in the graphical data flow program in response to user input, wherein the node is operable to invoke a property of an object;

configuring the node to receive information on the object in response to user input;

wherein, during execution of the graphical data flow program, the node is operable to invoke the property of the object.

12. The computer-implemented method of claim 11, wherein the node includes an object reference input for receiving a reference to the object;

wherein said configuring comprises connecting the object reference input of the node to receive the reference to the object;

wherein the node receives the information on the object on the object reference input during execution of the graphical data flow program.

13. The computer-implemented method of claim 12, wherein said configuring comprises:

displaying on the screen an object reference node which includes an object reference output that provides the reference to the object; and

connecting the object reference output of the object reference node to the object reference input of the node.

14. The computer-implemented method of claim 11, further comprising:  
executing the graphical data flow program, wherein said executing includes  
propagating the reference to the object from the object reference output of the object  
5 reference node to the object reference input of the node.

15. The computer-implemented method of claim 11, further comprising:  
executing the graphical data flow program, wherein said executing includes  
propagating the information on the object to the node.

16. The computer-implemented method of claim 11, wherein the object is  
comprised in a server, wherein said configuring comprises:  
displaying on the screen a list of libraries associated with one or more servers;  
selecting a library from the list of libraries in response to user input  
15 displaying on the screen a list of possible classes from the selected library;  
selecting a class from the list of possible classes in response to user input;  
wherein the object is instantiated from the class.

17. The computer-implemented method of claim 11, further comprising:  
20 constructing execution instructions in response to the graphical data flow  
program, wherein the execution instructions are executable to invoke the property of the  
object; and  
executing said execution instructions, wherein the node invokes the property of  
the object during said executing.

18. The computer-implemented method of claim 11, wherein the node is  
operable to get and/or set one or more properties of the object.

19. The computer-implemented method of claim 11, wherein the graphical data flow program is operable to invoke the property of the object for performing instrumentation functions on an instrument.

5 20. The computer-implemented method of claim 11, wherein the graphical data flow program includes a block diagram and a front panel, wherein the block diagram includes the node.

10 21. A memory medium comprising program instructions for creating a graphical data flow program, wherein the graphical data flow program is operable to invoke a method of an object, wherein the program instructions are executable to:

display on the screen a node in the graphical data flow program in response to  
15 user input, wherein the node is operable to invoke a method of an object;

configure the node to receive information on the object in response to user input, wherein said configuring comprises connecting the information on the object to an input of the node;

wherein, during execution of the graphical data flow program, the node is  
20 operable to invoke the method of the object.

22. The memory medium of claim 21, wherein the node includes an object reference input for receiving a reference to the object;

wherein said configuring comprises connecting the object reference input of the  
25 node to receive the reference to the object;

wherein the node receives the information on the object on the object reference input during execution of the graphical data flow program.

23. The memory medium of claim 22, wherein said configuring comprises:

displaying on the screen an object reference node which includes an object reference output that provides the reference to the object; and

connecting the object reference output of the object reference node to the object reference input of the node.

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24. The memory medium of claim 23, wherein the program instructions are further executable to:

execute the graphical data flow program, wherein said executing includes propagating the reference to the object from the object reference output of the object reference node to the object reference input of the node

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25. The computer-implemented method of claim 1, wherein the program instructions are further executable to:

construct execution instructions in response to the graphical data flow program, wherein the execution instructions are executable to invoke the method of the object; and execute said execution instructions, wherein the node invokes the method of the object during said executing.

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26. The memory medium of claim 25, wherein said executing includes propagating the information on the object to the node.

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27. The memory medium of claim 21, wherein the graphical data flow program is operable to invoke the method of the object for performing instrumentation functions on an instrument.

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28. The memory medium of claim 21, wherein the graphical data flow program includes a block diagram and a front panel, wherein the block diagram includes the node.

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29. A memory medium comprising program instructions for creating a graphical data flow program, wherein the graphical data flow program is operable to invoke a property of an object, wherein the program instructions are executable to:

display on the screen a node in the graphical data flow program in response to  
5 user input, wherein the node is operable to invoke a property of an object;  
configure the node to receive information on the object in response to user input;  
wherein, during execution of the graphical data flow program, the node is  
operable to invoke the property of the object.

10 30. The memory medium of claim 29, wherein the node includes an object reference input for receiving a reference to the object;

wherein said configuring comprises connecting the object reference input of the node to receive the reference to the object;

wherein the node receives the information on the object on the object reference  
15 input during execution of the graphical data flow program.

31. The memory medium of claim 30, wherein said configuring comprises:

displaying on the screen an object reference node which includes an object reference output that provides the reference to the object; and

20 connecting the object reference output of the object reference node to the object reference input of the node.

32. The memory medium of claim 29, wherein the program instructions are further executable to:

25 execute the graphical data flow program, wherein said executing includes propagating the reference to the object from the object reference output of the object reference node to the object reference input of the node.

33. The memory medium of claim 29, wherein the program instructions are  
30 further executable to:

construct execution instructions in response to the graphical data flow program,  
wherein the execution instructions are executable to invoke the property of the object; and  
execute said execution instructions, wherein the node invokes the property of the  
object during said executing.

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34. The memory medium of claim 29, wherein the node is operable to get  
and/or set one or more properties of the object.

35. The memory medium of claim 29, wherein the graphical data flow  
10 program is operable to invoke the property of the object for performing instrumentation  
functions on an instrument.

36. The memory medium of claim 29, wherein the graphical data flow  
program includes a block diagram and a front panel, wherein the block diagram includes  
15 the node.

37. A memory medium which stores a graphical data flow program;  
wherein the graphical data flow program includes a node which is operable to  
invoke a method of an object;  
20 wherein the node includes an input which is configurable to receive information  
on the object in response to user input;  
wherein, during execution of the graphical data flow program, the node is  
operable to invoke the method of the object.

38. A memory medium which stores a graphical data flow program;  
wherein the graphical data flow program includes a node which is operable to  
invoke a property of an object;  
25 wherein the node includes an input which is configurable to receive information  
on the object in response to user input;



wherein, during execution of the graphical data flow program, the node is operable to invoke the property of the object.